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| 10/611,779 | 06/30/2003 | Andrew J. Carroll | 020431.1304 | 1881 |

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| LEE, PHILIP C |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 August 2009*.
2a)☐ This action is **FINAL**.    2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-53* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-53* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

1.      This action is responsive to the amendment and remarks filed on August 12, 2009.

2.      Claims 1-53 are presented for examination.

3.      The text of those sections of Title 35, U.S. code not included in this office action can be

found in a prior office action.

*Objection*

4.      Claim 6 is objected to for the typographical error in line 5, "server server".

*Claim Rejections – 35 USC 102*

5.      Claims 1-2, 10-12, 18-19, 27-29, 35-36, 44-46 and 52 are rejected under 35 U.S.C. 102(e)

as being anticipated by Jayaram et al, U.S. Patent 6,996,589 (hereinafter Jayaram).

6.      Jayaram was cited in the previous office action.

7.      As per claims 1, 18, 35 and 52, Jayaram teaches the invention as claimed comprising:

        a data integration server coupled with one or more persistent data stores (system with the

        database conversion engine connected to the source database and target database)(fig. 1;

        col. 3, lines 33-52; col. 10, lines 56-63), the data integration server executing bulk data

        transfers between the one or more persistent data stores (col. 1, lines 6-9) according to an

enterprise-level (e.g., billing industry or telecom industry) business workflow (flow of

business information such customer information between 320 and 310 of figure 3;

abstract; col. 16, lines 1-12; col. 13, lines 6-8), the data integration server comprising:

a plurality of programmatic source interfaces (234, fig. 2, data filters with source extract

format specification; col. 14, lines 20-22), each coupled with one or more source data

stores (associated with source system 320, 225 of fig. 2), defined according to a common

programmatic source interface specification (defined according to source extract format

specification)(col. 11, lines 1-5), and exposed within the data integration server during

the bulk data transfer (abstract; col. 16, lines 1-12); and

a plurality of programmatic target interfaces (270, fig. 2, data upload process consists of

tools such as SQL loader (sqlldr; col. 18, lines 56-61) with target scheme specification

and mapping specification), each coupled with one or more target data stores (associated

with target system 310, fig. 2), defined according to a common programmatic target

interface specification (defined according to target scheme specification and mapping

specification)(col. 11, lines 5-11), and exposed within the data integration server during a

bulk data transfer (abstract),

wherein each of the plurality of programmatic source interfaces extracts from the one or

more source data stores one or more data entities for loading into any one or more target

data stores during the bulk data transfer (data filters used during bulk transfer to enable

the system to receive/pull source data for loading into the target system)(col. 11, lines 5-

11; col. 11, line 64-col. 12, line 10); and wherein each of the plurality of programmatic

target interfaces loads into the one or more target data stores the one or more data entities

extracted from the one or more source data stores during the bulk data transfer (data

filters used during bulk transfer to enable the system to receive/pull source data for

loading into the target system)(col. 11, lines 5-11; col. 11, line 64-col. 12, line 10).

8.      As per claims 2, 19, and 36, Jayaram teaches the invention as claimed in claims 1, 18,

and 35 above.  Jayaram further teach the data integration server exposes bulk data transfer

operations as services to applications or other systems (col. 10, lines 42-49) (bulk data

conversion and transfer is performed for the source system and target system)within an

enterprise-level infrastructure (e.g., billing industry or telecom industry infrastructure) and

executes a bulk data transfer operation in response to a request from such an application or other

system (col. 10, lines 58-63) (instructions such as scheduling instructions for performing the

conversion and transfer).

9.      As per claims 10, 27, and 44, Jayaram teaches the invention as claimed in claims 1, 18,

and 35 above.  Jayaram further teach a particular data store is a source data store or a target data

store for a particular bulk data transfer depending on whether data entities are extracted from the

particular data store or loaded into the particular data store during the particular bulk data

transfer (inherent in col. 2, lines 15-20) (system may be source or target depending on whether

information is from (i.e., extracted) one system into (i.e., loaded) into another system).

10.     As per claims 11, 28, and 45, Jayaram teaches the invention as claimed in claims 1, 18,

and 35 above.  Jayaram further teach loading data entities comprises inserting, updating, or

deleting data entities (col. 11, lines 1-11) (uploading data must comprises inserting data into a

target system).

11.    As per claims 12, 29, and 46, Jayaram teaches the invention as claimed in claims 1, 18,

and 35 above.  Jayaram further teach wherein each of the plurality of programmatic source

interfaces and the plurality of programmatic target interfaces comprise: one or more resources

representing data entities contained in the one or more data stores are defined (col. 14, lines 18-

22) (data filter and data upload comprise source extract format specification, mapping

specification and target scheme specification, representing the format of data); and the data

integration server, in response to a request to execute a bulk data transfer involving one or more

resources contained in one or more data stores (col. 10, lines 56-63) (instructions served to the

system for executing of schedule conversion and uploading must include request to execute),

creates each programmatic interface within which at least one of the resources is defined (in

response to conversion, generate source extract format specification within which format is

defined) (col. 14, lines 26-28).

*Claim Rejections – 35 USC 103*

12.    Claims 16-17, 33-34, 50-51 and 53 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jayaram in view of Bond et al, U.S. Patent Application Publication

2001/0008023 (hereinafter Bond).

13.     As per claims 16, 33, and 50, although Jayaram teaches one or more transformation

interfaces exposed within the data integration server (col. 10, lines 64-67), each transformation

interface: comprising one or more programmatic interfaces defined within the transformation

interface (col. 16, lines 24-26); comprising custom transformation logic to be applied to data

entities extracted from one or more source data stores in a bulk data transfer, using one or more

of the plurality of programmatic source interfaces (col. 16, lines 30-41), before the extracted data

entities are loaded into one or more target data stores in the bulk data transfer, using one or more

of the plurality of programmatic target interfaces (col. 16, lines 30-41); and the data integration

server is further configured to, in connection with creating the programmatic interfaces, create

each transformation interface within which at least one of the programmatic interfaces is defined

for application of the associated custom transformation logic in the bulk data transfer (col. 16,

lines 24-41), however, Jayaram does not specifically teach isolating transformation logic from

defined programmatic interfaces.  Bond teaches isolating transformation logic (240, fig. 2) from

defined programmatic interfaces (251, 253, fig. 2) ([0021]).  Because both Jayaram and Bond

teach method of interfacing systems for data transfer, it would have been obvious to one having

ordinary skill in the art at the time of the invention was made to use known technique of isolating

transformation logic from defined programmatic interfaces in Bond's system to improve similar

method of interfacing systems for data transfer in Jayaram's system in the same way.  By using

the known technique of isolating transformation logic from defined programmatic interfaces, it

would allow Jayaram's system to easily develop segments of codes separately for the

transformation logic and programmatic interfaces in a complex software system.

14.     As per claims 17, 34, and 51, Jayaram and Bond teach the invention substantially as

claimed in claim 16, 33, and 50 above.  Jayaram further teach a controller (inherently comprised)

supported within the data integration server to use a transformation interface in executing an

individual bulk data transfer without using a commercially available Extract-Transform-Load

(ETL) tool in connection with the bulk data transfer (col. 10, lines 24-67) (note that ETL is not

used in the conversion engine).

15.     As per claim 53, it is rejected for the same reason as claims 1, 2, 16, and 17 above.

16.     Claims 3, 20 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Jayaram in view of Shannon et al, U.S. Patent Application Publication 2002/0046301

(hereinafter Shannon).

17.     Shannon was cited in the previous office action.

18.     As per claims 3, 20, and 37, Jayaram does not teach Java interfaces.  Shannon teaches

Java interfaces ([0031] and claim 5).

19.     Because Jayaram and Shannon teach similar method of interfacing systems for data

transfer, it would have been obvious to one having ordinary skill in the art at the time of the

invention was made to use known technique of JAVA interface of Shannon's system to improve

similar method of interfacing systems for data transfer in Jayaram's system in the same way.  By

using the known technique of JAVA interface, it would allow Jayaram's system to map

transferred data between the systems.

20.    Claims 4-6, 8, 21-23, 25, 38-40 and 42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jayaram in view of Casagrande et al, U.S. Patent 6,381,709 (hereinafter

Casagrande).

21.    Casagrande was cited in the previous office action.

22.    As per claims 4, 21, and 38, Jayaram teaches the invention as claimed in claim 1 above.

Although Jayaram teaches a programmatic interface is exposed within the data integration server

supporting bulk data transfers (col. 11, lines 1-5); and the data integration server: creates the

programmatic interface to extract the data from or loading of the data into the data store (col. 14,

lines 26-28); and for data extraction, as the programmatic source interface produces the data

extracted from the data store, sends the outgoing data; or for data loading, as the data arrives,

sends the incoming data to the programmatic target interface for loading into the data store (col.

11, lines 1-11), however, Jayaram does not teach industry standard interface and industry

standard protocol. Casagrande teaches an interface supporting data transfer according to an

industry standard protocol (fig. 4, col. 8, lines 60-67); receives a request from a client indicating

that the client is extracting data from or loading data into a data store in accordance with the

industry standard protocol (col. 3, lines 48-51); and sends the outgoing data to the client in

accordance with the industry standard protocol (col. 3, lines 1-4).

23.     Because both Jayaram and Casagrande teach similar method of interfacing systems for

data transfer, it would have been obvious to one having ordinary skill in the art at the time of the

invention was made to use known technique of FTP interface of transferring data in Casagrande's

system to improve similar method of interfacing systems for data transfer in Jayaram's system in

the same way.  By using the known technique of FTP interface, it would allow Jayaram's system

to exchange data between systems on a network.


24.     As per claims 5, 22, and 39, Jayaram and Casagrande teach the invention substantially as

claimed in claims 4, 21, and 38 above.  Jayaram further teach the data integration server allows a

client supporting an industry standard protocol for bulk data transfers to perform bulk data

transfers with respect to an existing data store using a programmatic interface whether or not the

existing data store or an associated existing application itself supports bulk data transfers in

accordance with the industry standard protocol (col. 10, lines 43-63; col. 11, lines 23-27).


25.     As per claims 6, 23, and 40, Jayaram teaches the invention as claimed in claim 1 above.

Although Jayaram teaches a programmatic source interface is exposed within the data integration

server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server: creates

the programmatic source interface to extract of the data from the one or more source data store

(col. 14, lines 26-28); and as the programmatic source interface produces the data extracted from

the one or more source data store, sends the outgoing data (col. 11, lines 1-11), however,

Jayaram does not teach industry standard File Transfer Protocol (FTP) interface and FTP

industry standard protocol. Casagrande teaches a FTP interface supporting data transfer

according to an FTP industry standard protocol (fig. 4, col. 8, lines 60-67); and allows an FTP

client to open an FTP connection informing the data integration server that the FTP client is

downloading a stream of data from the corresponding source data store (col. 6, lines 10-15; col.

9, lines 58-60); and as the interface produces the stream of data extracted from the one or more

source data stores, sends the outgoing stream of data to the FTP client in accordance with FTP

(fig. 4, col. 3, lines 1-4).


26.     Because both Jayaram and Casagrande teach similar method of interfacing systems for

data transfer, it would have been obvious to one having ordinary skill in the art at the time of the

invention was made to use known technique of FTP interface of transferring data in Casagrande's

system to improve similar method of interfacing systems for data transfer in Jayaram's system in

the same way. By using the known technique of FTP interface, it would allow Jayaram's system

to exchange data between systems on a network.


27.     As per claims 8, 25, and 42, Jayaram teaches the invention as claimed in claim 1 above.

Although Jayaram teaches a programmatic source interface is exposed within the data integration

server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server: creates

the programmatic source interface to enable loading of the data into the one or more source data

store (col. 14, lines 26-28); and as the data arrives, sends the incoming data to the programmatic

target interface for loading into the one or more target data stores (col. 11, lines 1-11), however,

Jayaram does not teach industry standard File Transfer Protocol (FTP) interface and FTP

industry standard protocol. Casagrande teaches a FTP interface supporting data transfer

according to an FTP industry standard protocol (fig. 4, col. 8, lines 60-67); and allows an FTP

client to open an FTP connection informing the data integration server that the FTP client is

uploading a stream of data to the one or more target data store (col. 6, lines 10-15; col. 9, lines

58-60); and as the stream of data arrives from the FTP client in accordance with FTP, sends the

outgoing stream of data into the data store (fig. 4, col. 3, lines 1-4) (i.e., the server of fig. 4 is

interpreted as the FTP client and FTP client 12 and 24 of fig. 4 is the interpreted as the data

store).


28.     Because both Jayaram and Casagrande teach similar method of interfacing systems for

data transfer, it would have been obvious to one having ordinary skill in the art at the time of the

invention was made to use known technique of FTP interface of transferring data in Casagrande's

system to improve similar method of interfacing systems for data transfer in Jayaram's system in

the same way.  By using the known technique of FTP interface, it would allow Jayaram's system

to exchange data between systems on a network.


29.     Claims 13-15, 30-32 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Jayaram in view of Walsh et al, U.S. Patent Application Publication 2003/0233249

(hereinafter Walsh).


30.     Walsh was cited in the previous office action.

31.    As per claims 13, 30, and 47, Jayaram teaches the invention as claimed in claims 1, 18,

and 35 above.  Although Jayaram teach connect to data stores (fig. 1), whether or not the tool is

compatible with these data stores, using the programmatic interfaces to extract data entities from

and load data entities into these data stores (col. 11, lines 1-11), however, Jayaram does not teach

ETL tool.  Walsh teaches connect directly to data stores (fig. 1) with which the ETL tool is

compatible to extract data entities directly from and load data entities directly into these data

stores ([0092]).

32.    Because both Jayaram and Walsh teach similar method of interfacing systems for data

transfer, it would have been obvious to one having ordinary skill in the art at the time of the

invention was made to use known technique of ETL tool of transferring data in Walsh's system

to improve similar method of interfacing systems for data transfer in Jayaram's system in the

same way.  By using the known technique of ETL tool, it would allow Jayaram's system to

exchange data between systems on a network.

33.    As per claims 14, 31, and 48, Jayaram and Walsh teach the invention as claimed in

claims 13, 30, and 47 above.  Although Jayaram teach the data integration server uses

programmatic interfaces to support compatibility between any one or more data stores (col. 2,

lines 56-60), however, Jayaram and Walsh do not teach to support compatibility between any

commercially available ETL tool.  It would have been obvious to one having ordinary skill in the

art at the time of the invention was made to support ETL tool or any type of tools for the data

stores in order to provide a data store independent system allowing data conversion from any

source data stores into any target data stores.

34.     As per claims 15, 32, and 49, Jayaram and Walsh teach the invention as claimed in

claims 14, 31, and 48 above.  Jayaram further teach the data integration server supports a

controller to execute individual bulk data transfers using programmatic interfaces where either:

an Extract-Transform-Load (ETL) tool is not present (col. 3, lines 16-24) (i.e., ETL is not present

in the conversion engine); or an ETL tool is present but its capabilities are not needed to

transform data entities extracted from one or more source data stores, using one or more of the

plurality of programmatic source interfaces, before the extracted data entities are loaded into one

or more target data stores, using one or more of the plurality of programmatic target interfaces,

because physical database schemas of the source and target data stores are at least substantially

similar.

35.     Claims 7, 9, 24, 26, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Jayaram and Casagrande in view of Walsh.

36.     As per claims 7, 9, 24, 26, 41, and 43, Jayaram and Casagrande teach the invention

substantially as claimed in claims 6, 8, 23, 25, 40, and 42 above.  Jayaram and Casagrande do not

teach Extract-Transform-Load (ETL) tool.  Walsh teaches a commercially available Extract-

Transform-Load (ETL) tool supported within the data integration server ([0089], [0092]).

37.    Because Jayaram, Casagrande and Walsh teach similar method of interfacing systems for

data transfer, it would have been obvious to one having ordinary skill in the art at the time of the

invention was made to use known technique of ETL tool of transferring data in Walsh's system

to improve similar method of interfacing systems for data transfer in Jayaram's and Casagrande's

systems in the same way.  By using the known technique of ETL tool, it would allow Jayaram's

and Casagrande's systems to exchange data between systems on a network.


38.    Applicant's arguments with respect to claims 1-53, filed 8/12/09, have been fully

considered but they are not persuasive.


39.    In the remark, applicant argued that:


> (1)    The office action has failed to establish a prima facie case of
>
> anticipation in Claims 1, 2, 10-12, 18,19, 27-29, 35, 36, 44-46 and 52
>
> under 35 U.S.C. 102 with respect to Jayaram because Jayaram fails to
>
> identically disclose each and every element of Applications claimed
>
> invention, arranged as they are in Applicants claims.
>
> (2)    The office action fails to establish a prima facie case of
>
> obviousness based on the "Examination Guidelines for Determining
>
> Obviousness under 35 U.S.C. 103 in view of the Supreme Court Decision
>
> in KSR International Co. v. Teleflex Inc.
>
> (3)    The office action has not shown the factual findings necessary to
>
> establish obviousness or even an explanation to support the obviousness

rejection based on the proposed combination of Jayaram, Shannon,

Casagrande, and Walsh.

(4)     Office action fails to provide an indication of the level of ordinary

skill.

(5)     The Office action fails to explain why the difference between the

combination of Jayaram, Shannon, Casagrande, Walsh, and the claimed

invention would have been obvious to one of ordinary skill in the art.

(6)     The office action does not adequately provide clear articulation of

the reasons why applicants claimed invention would have been obvious.

40.     In response to points (1), (2) and (4)-(5), applicant's argument has been considered and

addressed to in the previous office action mailed on 5/12/09.

41.     In response to point (3), applicant's argument has been considered and addressed to in the

previous office action mailed on 3/21/08.

42.     In response to point (6), the rejections set forth above provide the factual findings and

rationale for obviousness based on Court Decision in *KSR International Co. v. Teleflex Inc.*

43.     A shortened statutory period for reply to this Office action is set to expire THREE

MONTHS from the mailing date of this action.  Any inquiry concerning this communication or

earlier communications from the examiner should be directed to Philip C Lee whose telephone

number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM

Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are

unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571) 272-6703. The

fax phone number for the organization where this application or proceeding is assigned is 571-

273-8300. Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


/Philip C Lee/

Primary Examiner, Art Unit 2448